IN THE CLAIMS

1. (Original) A magnetorheological damper, the damper comprising:

a cylindrically shaped housing;

a magnetorheological fluid disposed in the cylindrically shaped housing;

a piston assembly disposed within the cylindrically shaped housing in sliding engagement with the cylindrically shaped housing defining a first chamber and a second chamber, wherein the piston assembly comprises a plurality of cylindrically shaped fluid passageways extending from the first chamber to the second chamber, and at least one electromagnet; and

a power supply in electrical communication with the at least one electromagnet.

2. (Original) The magnetorheological damper of Claim 1, wherein the plurality of cylindrically shaped fluid passageways defines a cross sectional area of the piston assembly of at least about 30 to about 70 percent.

3. (Original) The magnetorheological damper of Claim 1, wherein the cylindrically shaped fluid passageways are formed from a plurality of annular plates stackedly arranged, wherein each one of the plurality of annular plates comprise a plurality of circular openings that when aligned with the other ones of the plurality of annular plates form the cylindrically shaped fluid passageways.

4. (Original) The magnetorheological damper of Claim 3, wherein each one of the plurality of annular plates comprising the plurality of circular openings

5. (Original) The magnetorheological damper of Claim 1, wherein the cylindrically shaped fluid passageway has a diameter that increases from the first chamber to the second chamber.

6. (Original) The magnetorheological damper of Claim 1, wherein the cylindrically shaped fluid passageway has a diameter that decreases from the first chamber to the second chamber.

7. (Original) The magnetorheological damper of Claim 1, further comprising a third chamber defined by a second floating piston and an end of the housing, wherein the third chamber is filled with an inert gas.

8. (Original) A magnetorheological damper, the damper comprising:

a cylindrically shaped housing;

a magnetorheological fluid disposed in the cylindrically shaped housing;

a piston assembly disposed within the cylindrically shaped housing in sliding engagement with the cylindrically shaped housing defining a first chamber and a second chamber, wherein the piston assembly comprises an open cell porous media comprising a plurality of fluid passageways extending from the first chamber to the second chamber, and at least one electromagnet centrally disposed in the piston assembly; and

a power supply in electrical communication with the at least one electromagnet.

9. (Original) The magnetorheological damper of Claim 8, wherein the fluid passageways have circular or polygon shaped cross sectional openings.

10. (Original) The magnetorheological damper of Claim 8, wherein the open cell porous media comprises a plurality of stackedly arranged sheets, wherein each sheet is a rigid lattice network of nonmetallic material having hexagonally shaped openings.

11. (Original) The magnetorheological damper of Claim 8, wherein the fluid passageways formed in the open cell porous media have a cross sectional area of about 30 to about 70 percent.

12. (Original) The magnetorheological damper of Claim 8, wherein the open cell porous media comprises a rigid foam comprising a plurality of irregularly shaped fluid passageways extending from the first chamber to the second chamber.

13. (Original) The magnetorheological damper of Claim 8, wherein the fluid passageways have different size and/or shaped openings.

14. (Original) The magnetorheological damper of Claim 8, further comprising a third chamber defined by a floating piston and an end of the housing, wherein the third chamber is filled with an inert gas.